

No.

200300244



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME;

Danisco Seed

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 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2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 2682, 2683, 2684, 2685, 2686, 2687, 2688, 2689, 2690, 2691, 2692, 2693, 2694, 2695, 2696, 2697, 2698, 2699, 2700, 2701, 2702, 2703, 2704, 2705, 2706, 2707, 2708, 2709, 2710, 2711, 2712, 2713, 2714, 2715, 2716, 2717, 2718, 2719, 2720, 2721, 2722, 2723, 2724, 2725, 2726, 2727, 2728, 2729, 2730, 2731, 2732, 2733, 2734, 2735, 2736, 2737, 2738, 2739, 2740, 2741, 2742, 2743, 2744, 2745, 2746, 2747, 2748, 2749, 2750, 2751, 2752, 2753, 2754, 2755, 2756, 2757, 2758, 2759, 2760, 2761, 2762, 2763, 2764, 2765, 2766, 2767, 2768, 2769, 2770, 2771, 2772, 2773, 2774, 2775, 2776, 2777, 2778, 2779, 2780, 2781, 2782, 2783, 2784, 2785, 2786, 2787, 2788, 2789, 2790, 2791, 2792, 2793, 2794, 2795, 2796, 2797, 2798, 2799, 2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808, 2809, 2810, 2811, 2812, 2813, 2814, 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2828, 2829, 2830, 2831, 2832, 2833, 2834, 2835, 2836, 2837, 2838, 2839, 2840, 2841, 2842, 2843, 2844, 2845, 2846, 2847, 2848, 2849, 2850, 2851, 2852, 2853, 2854, 2855, 2856, 2857, 2858, 2859, 2860, 2861, 2862, 2863, 2864, 2865, 2866, 2867, 2868, 2869, 2870, 2871, 2872, 2873, 2874, 2875, 2876, 2877, 2878, 2879, 2880, 2881, 2882, 2883, 2884, 2885, 2886, 2887, 2888, 2889, 2890, 2891, 2892, 2893, 2894, 2895, 2896, 2897, 2898, 2899, 2900, 2901, 2902, 2903, 2904, 2905, 2906, 2907, 2908, 2909, 2910, 2911, 2912, 2913, 2914, 2915, 2916, 2917, 2918, 2919, 2920, 2921, 2922, 2923, 2924, 2925, 2926, 2927, 2928, 2929, 2930, 2931, 2932, 2933, 2934, 2935, 2936, 2937, 2938, 2939, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 2952, 2953, 2954, 2955, 2956, 2957, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 2971, 2972, 2973, 2974, 2975, 2976, 2977, 2978, 2979, 2980, 2981, 2982, 2983, 2984, 2985, 2986, 2987, 2988, 2989, 2990, 2991, 2992, 2993, 2994, 2995, 2996, 2997, 2998, 2999, 3000, 3001, 3002, 3003, 3004, 3005, 3006, 3007, 3008, 3009, 3010, 3011, 3012, 3013, 3014, 3015, 3016, 3017, 3018, 3019, 3020, 3021, 3022, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3030, 3031, 3032, 3033, 3034, 3035, 3036, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, 3046, 3047, 3048, 3049, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3062, 3063, 3064, 3065, 3066, 3067, 3068, 3069, 3070, 3071, 3072, 3073, 3074, 3075, 3076, 3077, 3078, 3079, 3080, 3081, 3082, 3083, 3084, 3085, 3086, 3087, 3088, 3089, 3090, 3091, 3092, 3093, 3094, 3095, 3096, 3097, 3098, 3099, 3100, 3101, 3102, 3103, 3104, 3105, 3106, 3107, 3108, 3109, 3110, 3111, 3112, 3113, 3114, 3115, 3116, 3117, 3118, 3119, 3120, 3121, 3122, 3123, 3124, 3125, 3126, 3127, 3128, 3129, 3130, 3131, 3132, 3133, 3134, 3135, 3136, 3137, 3138, 3139, 3140, 3141, 3142, 3143, 3144, 3145, 3146, 3147, 3148, 3149, 3150, 3151, 3152, 3153, 3154, 3155, 3156, 3157, 3158, 3159, 3160, 3161, 3162, 3163, 3164, 3165, 3166, 3167, 3168, 3169, 3170, 3171, 3172, 3173, 3174, 3175, 3176, 3177, 3178, 3179, 3180, 3181, 3182, 3

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Danisco Seed		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME 4-9376		3. VARIETY NAME DS-Admiral	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Højbygaardvej 31 4960 Høleby DENMARK		5. TELEPHONE (Include area code) +45-5460-6031		FOR OFFICIAL USE ONLY PVPO NUMBER 200300244 FILING DATE May 7, 2003	
		6. FAX (include area code) +45-5460-6375			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) DANISCO A/S, LANGEBOGAVE DK-1001 COPENHAGEN		8. IF INCORPORATED, GIVE STATE OF INCORPORATION DENMARK			
9. DATE OF INCORPORATION YEAR 1881		10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Ottmar PHILIPP agriprogress inc. P.O.Box 2499 Morden, MB R6M 1C2 Phone 204-331-3611 Fax 204-325-8052 CANADA		FILING AND EXAMINATION FEES: \$ 3652.00 DATE 5/07/2003 CERTIFICATION FEE: \$ 432.00 DATE 10/16/2003	
11. TELEPHONE (Include area code) 204-331-3611		12. FAX (include area code) 204-325-8052		13. E-MAIL agriprogress@mts.net	
14. CROP KIND (Common Name) Field pea		15. GENUS AND SPECIES NAME OF CROP Pisum sativum L.		16. FAMILY NAME (Botanical) Fabaceae	
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no", go to item 22)	
20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)		22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)	
23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.) CANADA; 2000/05/01; # 00-2221		24. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER Michael Pål Andersen		SIGNATURE OF OWNER Representative Ottmar PHILIPP			
NAME (Please print or type) MICHAEL PÅL ANDERSEN		NAME (Please print or type) Ottmar PHILIPP			
CAPACITY OR TITLE BUSINESS AREA MANAGER		DATE April 6, 2003		CAPACITY OR TITLE Agent	
		DATE April 6, 2003			

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

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(Instructions and information collection burden statement on reverse)

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Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME DS 49376		3. VARIETY NAME DS-Admiral	
4. ADDRESS (Street and No., or R.F.D. No., and State, and Country) agipprogress inc. P.O.Box 2499 Morden, MB R6M 1C2 Phone 204-331-3611 Fax 204-325-8052		5. TELEPHONE (include area code)		FOR OFFICIAL USE ONLY PVPO NUMBER FILING DATE	
		6. FAX (include area code)			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)				F E E S \$ DATE CERTIFICATION FEE: \$ DATE	
11. TELEPHONE (Include area code)		12. FAX (Include area code)		13. E-MAIL	
14. CROP KIND (Common Name)		15. GENUS AND SPECIES NAME OF CROP		16. FAMILY NAME (Botanical)	
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input type="checkbox"/> Exhibit B. Statement of Distinctness c. <input type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no", go to item 22)	
20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)		22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)	
23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		24. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.		SIGNATURE OF OWNER	
NAME (Please print or type)		NAME (Please print or type)		CAPACITY OR TITLE	
CAPACITY OR TITLE		DATE		DATE	

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. **CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

one generation each for Foundation and Registered.

With special permission two generations of certified may be grown.

22. **CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

CANADA: May 2000, transfer of Breeder Seed

USA: June 3, 2002 first sale to Legume Logic, Crosby, North Dakota

23. **CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

PBR granted in Canada, Application # 00-2221, Application date: 2000/05/01

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705.

Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete.

FAX**DANISCO****200300244**

To Agriprogress

Fax no 00 1 204 235 8052

Copy

Date 5 May 2003

Total number of pages 1

Sender Lars Andersen

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 lars.andersen@danisco.com

DS Admiral

Dear Ottmar,

You returned my fax with a question about Admiral in the UK.

DS 49376 was applied in Denmark under the vegetable variety list regulations as a round seed type for human consumptions. The d.u.s test under these regulations is not carried out in Denmark, but in UK on a service agreement between the UK and Danish authorities.

After two years of test we received a positive d.u.s. report from UK. And DS 49376 was in principle accepted by the Danish Authorities for registration, but we stopped the process at that time, and the variety was never listed.

The where never applied for a name for DS 49376 Denmark, UK or anywhere else in Europe, and the variety has never been sold in Europe.

Kind regards
 DANISCO SEED

Lars Andersen
 Lars Andersen
 Plant Breeding Manager



Exhibit A:**ORIGIN AND BREEDING HISTORY OF "DS-ADMIRAL"**

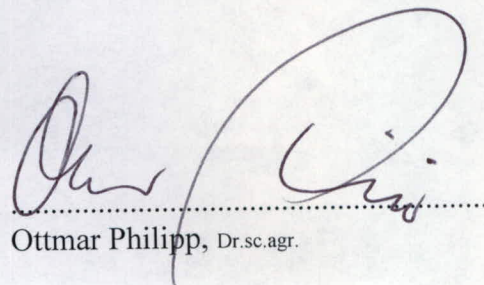
"DS-Admiral" originated from the cross ~~Renata/Bohatyr/M420062~~ made in 1988 in Holeby, Denmark by Danisco Seed.

The selection was made by pedigree breeding method in F₂, F₅, and F₉. Selection criteria were high seed yield, round yellow seed, resistance to powdery mildew, early maturity, and good straw stiffness.

First generation breeders seed was obtained as progeny from F₉ single plants.

The variety is being maintained by Agriprogress Inc., in Morden, Manitoba.

May 5, 2003


Ottmar Philipp, Dr.sc.agr.

MAH
9-13-2003

Exhibit A:

Q: "Please clarify the following line: M420062"

A: M420062 is the identity code for a breeding line based on the four way cross: (A x B) x (C x D) ((A: Filby x B: Finale) x (C: Filby x D: M420062)). The last cross was made in 1988.

The Parent D with the breeding code M420062 was selected in a commercial seed lot of the variety Birte in Denmark in 1983. According to our records the plant looked very much like Birte plants but was resistant to powdery mildew which Birte is not. It is our belief that this off type plant originates from an uncontrolled cross between an unknown powdery mildew resistant parent variety (maybe a vegetable pea) and Birte. Even though the pea is highly autogamneous cross-pollination is known to happen in very rare cases. Especially, if there are a lot of bumblebees around in the pea field. The bumblebee can bite through the still closed small flower bud before anthesis and confer cross-pollination. The parent D single plant is lost today, no selfed seed was harvested of it because it had no commercial interest apart from serving as parent in our crossing programme)

So the parentage statement for DS Admiral should be corrected to:

((Filby x Finale) x (Filby x (Re-selection in Birte))

Q: "Evidence of uniformity and stability"

A: DS Admiral alias DS49376 was declared Distinct Uniform and Stable after two years of test by SASA. Please refer to the letter from SASA dated 19.Dec.2001.

Q: "The type and frequency of variants..."

A: In DS Admiral alias DS49376, SASA found 1 out of 900 tested plants to be a semi-sterile variant. Please refer to the letter from SASA dated 19.Dec.2001.



Scottish Agricultural Science Agency

An Agency of the Scottish Executive Rural Affairs Department

Lars Andersen
Danisco Seed A/S
Højbygårdvej 14
Postboks 29
DK-4960 Holeby
DENMARK

OIL AND PROTEIN

04 JAN 2002

ACTION	LA	COPY	MPA
REPLY		FILE	DP

19th December 2001

Dear Lars

DUS VEGETABLE PEA CANDIDATES 2001

I am pleased to provide you with the following information regarding the vegetable pea candidates submitted for test by Danisco.

YEAR 2 AFP 11/623 DS49376

The recommendation made on the above candidate was **Distinct, Uniform and Stable** after 2 years of test.

YEAR 2 AFP 11/621 DS 89043

DS 89043 was withdrawn 2nd March 2001.

YEAR 1 AFP 11/628 DS 89228

DS 89228 is resistant to Race 1 of Pea Wilt and after 1 year is closest to DS89083, Gonzo, Filly and Purser.

Uniformity: Unsatisfactory. In the first year of the test there were 8 off-types (taller plants with reduced stipule flecking and narrower, more curved pods) observed amongst 400 plants, this was considered a borderline uniformity problem. The maximum acceptable numbers of off-types in a sample of 400 is 8, calculated on the basis of a 1% tolerance limit at 95% probability.

Recommendation: Clear for second year of test. An improved sample is to be resubmitted providing it is not different from the original sample (as agreed with the Danish Testing Authorities).

YEAR 1 AFP 11/629 DS 89083

DS 89083 is resistant to Race 1 of Pea Wilt. Comparisons were made with double-podded controls as field observations found the candidate was not triple-podded. After 1 year the closest controls include Gonzo, Kermit and DS89228.

Uniformity: Unsatisfactory. In the first year of the test there were 9 off-types (4 plants with absent stipule flecking, 4 with reduced stipule flecking and 1 semi-sterile plant) observed amongst 400 plants, this was considered a borderline uniformity problem. The maximum acceptable numbers of off-types in a sample of 400 is 8, calculated on the basis of a 1% tolerance limit at 95% probability.

Recommendation: Clear for second year of test. An improved sample is to be resubmitted providing it is not different from the original sample (as agreed with the Danish Testing Authorities).

- 11 -

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TL522121

Director: Dr. R. K. M. Hay 82 Craigs Road, East Craigs, Edinburgh, EH12 8NJ, Scotland

YEAR 1 AFP 11/630 DS 89053 (Premio)

DS 89053 (Premio) is resistant to Race 1 of Pea Wilt and after 1 year is closest to Tringo in the multipod group. However, it will be necessary to include double podded controls in the second year of test as the candidate only showed an average of 2.1 pods per node in the field.

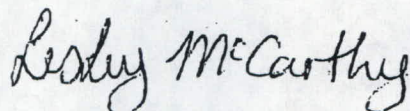
Uniformity: Satisfactory, no off-types observed amongst 400 plants.

Recommendation: Clear for second year of test.

These recommendations are subject to the approval of the UK National List and Seeds Committee.

If I can be of further assistance please do not hesitate to contact me.

Yours sincerely



LESLEY MCCARTHY

Technical Officer for Vegetable Peas

Tel: +44 (0) 131 244 8820

Email: Lesley McCarthy@sasa.gsi.gov.uk



Scottish Agricultural Science Agency

An Agency of the Scottish Executive Rural Affairs Department

Mr Lars Andersen
Danisco Seed A/S
Højbygårdsvej 14
DK 4960 Holeby
Denmark

OIL & PROTEIN	
18 DEC 2000	
ACTION LA	COPY
REPLY	FILE

Extn 8907

11 December 2000

Dear Mr Andersen

DUS VEGETABLE PEA CANDIDATES 2000

I have the following comments on the candidates entered for DUS tests for Danisco varieties, being tested on behalf of Denmark.

YEAR 1 AFP 11/621 DS89043

Resistant to Race 1 of Pea Wilt.

DS89043 was found to have fewer triple podded plants than expected from the Technical Questionnaire, in that it had 2.2 pods per node and control varieties had at least 2.7, pods per node.

Of the multipodded controls, the closest was Legacy. It was also close to Camina. For 2001, we will scan the database for double podded controls which are otherwise close. It may be that the multipodding will hold up and give sufficient difference from these controls, but we will have to check this in the field in 2001.

Uniformity: 1/900 variants. 1 plant with partial chimera. Satisfactory.
Clear for second year of test.

YEAR 1 AFP 11/622 DS89034

This gave a mixed reaction to Pea Wilt Race 1, but this is likely to have been due to the mixture of plant types present in the submitted stock.

Uniformity: c. 25% off-types present. Unsatisfactory.

We note the variety was withdrawn from test.

-13-

8



INVESTING IN PEOPLE

Director: Dr. R. K. M. Hay 82 Craigs Road, East Craigs, Edinburgh, EH12 8NJ, Scotland
Tel: +44 (0) 131 244 8890 Fax: +44 (0) 131 244 8940
Email: enquiries@sasa.gov.uk Website: http://www.sasa.gov.uk

YEAR 1 AFP 11/623 DS49376

Susceptible to Race 1 of Pea Wilt. It was claimed to be resistant to Powdery Mildew, but field conditions in 2000 did not allow this to be confirmed in the field. It will be checked in 2001.
DS49376 is most similar to Alberta and a candidate from Nickerson coded 'NSA 96-0104'.

Uniformity: 1/900 variants. 1 semi-sterile plant. Satisfactory.

Clear for second year of test.

I trust this keeps you informed at the end of the test year.

Yours sincerely

Morellen Thomson

Morellen Thomson

Tel : 0131 244 8907

Email : Morellen.Thomson@sasa.gov.uk

Exhibit B:**STATEMENT OF DISTINCTNESS OF "DS-ADMIRAL"**

"DS-Admiral" is new and distinct when compared to other varieties and is most similar to the variety "Eclipse"

"DS-Admiral" differs most when compared to "Eclipse" in the following characters:

1. "Rabbit-eared" stipule divergence
2. Stipule density of flecking
3. Plant height
4. Length of Peduncle
5. Protein content

To 1. "DS-Admiral" has a lower average score (6.75) for the presence of "rabbit-eared" stipules when compared to "Eclipse" (2.3). Rating scale 1-9 (1=absent, 9=present). Data 2000 and 2001, four observations each per year.

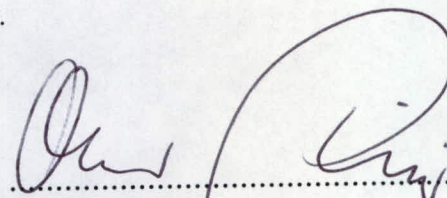
To 2. "DS-Admiral" has a lower average score (3.7) for the stipule density of flecking when compared to "Eclipse" (7.4). Rating scale 1-9 (1=very sparse, 9= very dense). Data 2000 and 2001, four observations each per year.

To 3. "DS-Admiral" is taller in plant height (73 cm) when compared to "Eclipse" (57 cm). Data 2000 and 2001, twenty measurements each per year.

To 4. "DS-Admiral" has a greater length of the peduncle at th 1st flowering node from axil to first peduncle node (68 mm) when compared to "Eclipse" (56 mm). Data 2000 and 2001, twenty measurements each per year.

To 5. "DS-Admiral" has a lower protein content (range 24% to 24.5%) when compared to "Eclipse" (range 24.6% to 25.6%). Data 2000, four measurements each per year.

May 5, 2003



.....
Ottmar Philipp, Dr.sc.agr.

Exhibit B:

Q: *"Please provide supportive data /statistics"*

A: Please refer to the letter from SASA dated July 2003 in which the differences in quantitative Characters are provided as numerical data and with the relevant statistical analysis. This data set formed the background for the Exhibit D, 1 UPOV description of DS Admiral. This data set has not been available to us until now, and as such was not available on May 5. when we made our application for PVP on DS Admiral. The variety owner does not normally get access to these data, but the UK authorities have made an exception in this case.

Because we now have new relevant information, we would like to change elements of the Exhibit B: Statement of distinctness of DS ADMIRAL.

Changes to Exhibit B:

Point 1.: *"Rabbit-eared stipules"*

Change: Both varieties have fully developed stipules and have not rabbit eared stipules. But they differ in with of the stipules. This also resolves the problem with the question on *"conflicting information in Exhibit D."*

Point 4.: *"peduncle length"*

Change: Should be taken out. In the UK data there is no significant difference in this character.



Scottish Agricultural Science Agency

An Agency of the Scottish Executive Environment and Rural Affairs Department

Lars Andersen
Danisco Seed
Højbygårdvej
DK-4960 Høleby

July 2003

Dear Lars

REF: DS49376 ALIAS DS ADMIRAL

Thank you for your letter dated 25 July 2003 requesting information about the varieties DS49376 and Eclipse.

In response to your request I have sent you year means for each of the two years of trial, 2000 and 2001. This shows the measurements and score values recorded for the characters: plant height, number of ovules per pod, stipule size, shape and intensity of flecking, shape of flower standard base and peduncle length plus other characters which were recorded for the purpose of the trial. The characters that show a repeated difference over the two years and their significance level is given at the bottom of the table.

The information requested for distal shape of pod and immature seed colour is stated in the UPOV Official Description.

I have also included, for your reference, a second matrix showing the combined over years analysis, which is the current accepted UPOV method for determining Distinctness.

I hope that you will find this information useful for your application and if you have any other queries regarding this matter please do not hesitate to contact us.

Regards.

Yours sincerely

GILLIAN HULL
DUS Trials Officer

Tel : 0131 244 8820

Email : gillian.hull@sasa.gsi.gov.uk

TLSI00073

Director: Dr. R. K. M. Hay 82 Craigs Road, East Craigs, Edinburgh, EH12 8NJ, Scotland
Tel: +44 (0) 131 244 8890 Fax: +44 (0) 131 244 8940
Email: enquiries@sasa.gsi.gov.uk Website: <http://www.sasa.gov.uk>

DS49376 SINGLE YEAR MEANS TEST YEAR 2000

DS49376 SINGLE YEAR MEANS TEST																			
UK CHARACTER No. CHARACTER DESCRIPTION	1 PHF	3 PETLEN	7 PEDLEN	10 DFF	12 DEPF	19 MAXF	25 SW	26 SBS	37 FLECK	41 STIPLEN	44 STIPWID	46 FOLCOL	61 ODCURV	71 FFNODE	74 PODLEN	75 PODWID	76 SOVS	80 HSW	88 PHH
00053 DS49376	99,5	87	79,35	16,5	19,5	2	30,25	8,5	6	81,2	47,050	60,000	3,500	18,100	77,675	12,775	8,600	26,380	120,600
00042 Cebeco 1475	74,5	80,15	84,45	14,5	18	1,975	31,9	5,5	7	92,05	51,400	60,000	2,500	14,775	75,600	13,275	7,400	26,770	97,350
STD ERRORS	3,236	3,899	7,081	0,472	0,534	0,021	0,723	0,295	0,287	3,957	2,637	0,769	0,293	0,346	1,571	0,262	0,121	0,775	4,263
L.S.D. 5%	9,025	10,874	19,747	1,315	1,49	0,058	2,017	0,821	0,799	11,035	7,353	2,144	0,818	0,966	4,38	0,731	0,336	2,162	11,89
L.S.D. 2%	10,733	12,933	23,486	1,564	1,772	0,07	2,398	0,977	0,95	13,124	8,746	2,55	0,972	1,149	5,209	0,869	0,4	2,571	14,141
L.S.D. 1%	11,903	14,342	26,045	1,735	1,965	0,077	2,659	1,083	1,054	14,555	9,699	2,828	1,078	1,274	5,776	0,964	0,443	2,851	15,682
L.S.D. 0.1%	15,288	18,421	33,451	2,228	2,523	0,099	3,415	1,391	1,353	18,693	12,457	3,631	1,385	1,636	7,416	1,238	0,569	3,661	20,141
STATISTICALLY SIGNIFICANT DIFFERENCES CHARACTERS: + VE IF DS49376 LARGER	+	+	-	+1	+5	+	-	+	-2	-	-	0	+2	+	+	-	+	-	+
SIGNIFICANCE LEVEL																			
(*) INDICATES 0.1%	Total no. of differences at:			0,10%	1%	2%	5%												
(1) INDICATES 1.0%				5	6	8	9												
(2) INDICATES 2.0%																			
(5) INDICATES 5.0%																			

DS49376 SINGLE YEAR MEANS TEST YEAR 2001

DS49376 SINGLE YEAR MEANS TEST YEAR 1997																				
UK CHARACTER No. CHARACTER DESCRIPTION	1 PHF	3 PETLEN	7 PEDLEN	10 DFF	12 DEPF	19 MAXF	25 SW	26 SBS	37 FLECK	41 STIPLEN	44 STIPWID	46 FOLCOL	61 ODCURV	71 FFNODE	74 PODLEN	75 PODWID	76 SOVS	80 HSW	88 PHH	
00053 DS49376	96,000	81,550	75,100	22,500	25,500	2,000	32,600	8,000	6,000	69,450	35,500	60,000	3,000	18,700	72,925	12,950	8,450	25,525	122,150	
00042 Cebeco 1475	75,500	75,200	69,050	20,500	23,500	2,000	33,450	6,000	7,500	84,000	45,200	60,000	2,000	14,950	72,125	13,675	7,200	31,160	116,250	
STD ERRORS	3,053	2,615	4,774	0,438	0,469	0,015	0,582	0,288	0,293	2,683	1,840	0,726	0,324	0,190	1,577	0,252	0,125	0,767	4,111	
L.S.D. 5%	8,512	7,291	13,310	1,222	1,307	0,042	1,622	0,803	0,817	7,480	5,129	2,024	0,904	0,503	4,396	0,703	0,349	2,139	11,462	
L.S.D. 2%	10,122	8,671	15,827	1,453	1,554	0,050	1,929	0,955	0,971	8,895	6,099	2,406	1,075	0,598	5,228	0,836	0,415	2,543	13,630	
L.S.D. 1%	11,224	9,615	17,551	1,611	1,723	0,055	2,139	1,059	1,077	9,864	6,763	2,668	1,192	0,663	5,797	0,927	0,461	2,820	15,114	
L.S.D. 0.1%	14,412	12,345	22,535	2,068	2,212	0,071	2,746	1,359	1,383	12,865	8,683	3,426	1,531	0,852	7,443	1,191	0,591	3,621	18,406	
STATISTICALLY SIGNIFICANT DIFFERENCES CHARACTERS: + VE IF DS49376 LARGER	+	+	+	+1	+1	0	-	+	-	-	-	0	+5	+	+	-5	+	-	+	
SIGNIFICANCE LEVEL																				
(*) INDICATES 0.1%	Total no. of differences at:			0,10%	1%	2%	5%													
(1) INDICATES 1.0%				8	10	10	12													
(2) INDICATES 2.0%																				
(5) INDICATES 5.0%																				

Distinctness [2 x 5% with the same sign (+ or -)]

DS49376 is significantly different from Cebeco 1475 for characters 1 (0.1%), 10 (1%), 12 (5%), 26 (0.1%), 37 (2%), 61 (5%), 71 (0.1%), 76 (0.1%).

Refer to Annex for Character Descriptions

N.Green

Chairman UK DUS Centre for Peas

Date

2000/2001 Combined Over Years Means

UK CHARACTER No.	1	3	7	10	12	19	25	26	37	41	44	46	61	71	74	75	76	80	88
CHARACTER DESCRIPTION	PHF	PETLEN	PEDLEN	DFF	DEPF	MAXF	SW	SBS	FLECK	STIPLEN	STIPWID	FOLCOL	ODCURV	FFNODE	PODLEN	PODWID	SOVS	HSW	PHH
00053 DS49376	97,750	84,260	77,220	19,500	22,500	2,000	31,420	8,250	6,000	75,320	41,280	60,000	3,250	18,400	75,300	12,860	8,520	25,950	121,380
00042 Cebeco 1475	75,000	77,680	76,750	17,500	20,750	1,990	32,670	5,750	7,250	88,030	48,300	60,000	2,250	14,860	73,860	13,480	7,300	26,970	106,800

2000/2001 Combined Over Years Analysis (COYD) - current accepted UPOV method

CANDIDATE VARIETY: 00053 DS49376 PROBLEM VARIETY: 00042 Cebeco 1475

UK Character Number	1	3	7	10	12	19	25	26	37	41	44	46	61	71	74	75	76	80	88
Character Description	PHF	PETLEN	PEDLEN	DFF	DEPF	MAXF	SW	SBS	FLECK	STIPLEN	STIPWID	FOLCOL	ODCURV	FFNODE	PODLEN	PODWID	SOVS	HSW	PHH
T Values	5.9	1.67	0.07	3.02	2.54	0.55	-1.7	6.03	-3.27	-3.53	-2.93	0	2.38	6.78	0.57	-1.46	7.6	-1.75	3.14
Prob %	0	9.753	94.636	0.294	1.209	58.413	-9.036	0	-0.131	-0.056	-0.386	100	1.855	0	56.929	-14.653	0	-8.17	0.202
Significance level	+	NS	NS	+1	+2	NS	NS	+	+1	+	+1	NS	+2	+	NS	NS	+	NS	+1
T VALUES +VE IF DS49376 LARGER																			

SIGNIFICANCE LEVEL

(*) INDICATES 0.1%

(1) INDICATES 1.0%

(2) INDICATES 2.0%

(5) INDICATES 5.0%

Distinctness (minimum 2%)

DS49376 is significantly different from Cebeco 1475 for characters 1 (0.1%), 10 (1%), 12 (2%), 26 (0.1%), 37 (1%), 41 (0.1%), 44 (1%), 61 (2%), 71 (0.1%), 76 (0.1%), 88 (1%)

SUMMARY - DISTINCT USING BOTH 2 X 5% AND COYD METHODS, UNIFORM AND STABLE.

Refer to Annex for Character Descriptions

N.Green

Chairman UK DUS Centre for Peas

Date

UK CHARACTER No.	CHARACTER	DESCRIPTION
1	PHF	Plant height at 80% flowering
3	PETLEN	Petiole length at 2nd fertile node
7	PEDLEN	Peduncle length at 2nd flowering node
10	DFF	Days to first flower
12	DEPF	Days to 80% flowering
19	MAXF	Flowers: maximum at any node
25	SW	Flower: standard width
26	SBS	Flower: standard base shape
37	FLECK	Stipule flecking (maximum expression)
41	STIPLEN	Stipule length at 2nd fertile node
44	STIPWID	Stipule width at 2nd fertile node
46	FOLCOL	Foliage colour
61	PODCURV	Maximum pod curvature
71	FFNODE	Number of first flowering node
74	PODLEN	Pod length at 2nd fertile node
75	PODWID	Pod width at 2nd fertile node
76	SOVS	Number of ovules at 2nd fertile node
80	HSW	Dry seed: weight of 100 seeds
88	PHH	Plant height

-9-

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Pea)

OBJECTIVE DESCRIPTION OF VARIETY
PEA (*Pisum sativum* L.)

NAME OF APPLICANT(S) <i>Dr. Ottmar PHILIPP</i>	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) agriprogress inc. P.O.Box 2499 Morden, MB R6M 1C2 Phone 204-331-3611 Fax 204-325-8052 CANADA	PVPO NUMBER 200300244
	VARIETY NAME <i>DS-Admiral</i>
	TEMPORARY OR EXPERIMENTAL DESIGNATION <i>DS 49376</i>

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____ Please answer all questions for your variety; lack of response may delay progress of your application.

1. TYPE:

<input type="text" value="2"/>	1=Garden	2=Field	3=Edible-podded	4=Other (SPECIFY) : _____
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2. MATURITY:

<input type="text" value="18"/>	Node number of first bloom:	<input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/>	No. of days processing	<input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/>	Heat Units
<input type="text" value="0"/> <input type="text" value="1"/>	No. of days Earlier than	<input type="text" value="1"/>	1 = Alaska WR	2 = Thomas Laxton WR	3 = Little Marvel
<input type="text" value="0"/> <input type="text" value="0"/>	No. of days Later than	<input type="text" value="2"/>	4 = Wando	5 = Alderman WR	6 = Austrian Winter
			7 = Other		

3. PLANT HEIGHT:

<input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/>	Cm. High		
<input type="text" value="0"/> <input type="text" value="0"/>	Cm. Shorter than	<input type="text" value="1"/>	Name of check cultivar <i>CARNEVAL</i>
<input type="text" value="1"/> <input type="text" value="5"/>	Cm. Taller than	<input type="text" value="1"/>	Name of check cultivar <i>ECLIPSE</i>

4. VINE:

<input type="text" value="1"/>	Habit: 1=Determinate	2=Indeterminate	<input type="checkbox"/>	Stockiness: 1 = Slim (Alaska)
				2 = Medium (Thomas Laxton WR)
				3 = Heavy (Alderman)
<input type="text" value="2"/>	Branching: 1 = None (Alaska)	2 = 1-2 Branches (Little Marvel)	3 = More than 2 Branches (Dwarf Gray Sugar)	
<input type="text" value="1"/>	Internodes: 1 = Straight	2 = Zig Zag	<input type="text" value="2"/> <input type="text" value="2"/>	Number of nodes

5. LEAFLETS:

☐ 0 Color: 1 = Light Green (Alaska WR) 2 = Medium Green (Thomas Laxton WR) 3 = Dark Green (Alderman)
 4 = Other (Specify) _____ 5 = Blue Green 6 = Yellow Green 0 = Not Applicable

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☐ 0 Wax: 1 = None 2 = Light 3 = Medium 4 = Heavy 0 = Not Applicable
 ☐ 0 1 = Not Marbled 2 = Marbled (Alaska)
 0 = Not Applicable

☐ 0 Number of Leaflet Pairs: 1 = Not Paired 2 = One 3 = Two 4 = Three or More 0 = Not Applicable

☐ 1 Leaflet Type: 1 = Leafless 2 = Semi 3 = Normal

*DS-Admiral is an afila type.
 Leaflets are converted into
 tendrils.*

6. STIPULES:

☐ 2 1 = Lacking 2 = Present
 ☐ 2 1 = Not Clasping 2 = Clasping

☐ 2 1 = Not Marbled 2 = Marbled
 ☐ 0 Size (Compared with leaflets):
 1 = Smaller 2 = Same
 3 = Larger 0 = Not Applicable

☐ 0 Color (Compared with Leaflets): 1 = Lighter 2 = Same 3 = Darker 0 = Not Applicable

☐ 2 Color: 1=Light-Green 2=Medium-Green 3=Dark-Green 4=Blue-Green 5=Yellow-Green 6=Other _____
(Actually 2-3, Medium to Dark-Green)

Color Chart Value: _____

Select the Color Chart Used to Determine Values.

_____ Royal Horticulture Society Colour Chart
 _____ Munsell Color Chart
 _____ Other _____

☐ 2 Stipule Size: 1=Small 2=Medium 3=Large

Please provide comparative varieties (check varieties) and stipule color.

	Variety (1)	Variety (2)	Variety (3)
Variety Name:	<u>CARRERA</u>	<u>Delta</u>	<u>Eclipse</u>
Stipule Size:	<u>Medium</u>	<u>Medium</u>	<u>Medium to Large</u>
Color Chart Value:	<u>Medium to Dark-green</u> <u>Same color as</u> <u>DS-Admiral</u>	<u>Medium</u>	<u>Medium to Dark-green</u>

7. FLOWER COLOR:

☐ 1 Venation
 ☐ 1 Standard
 ☐ 1 Wing
 ☐ 1 Keel

1 = White
 2 = Greenish
 3 = Lavender
 4 = Purple
 5 = Red
 6 = Other (specify) _____

8. PODS:

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☐ 2 Shape: 1 = Straight 2 = Slightly Curved 3 = Curved
☐ 2 End: 1 = Pointed (Alderman) 2 = Blunt (Alaska)
 Color: 1 = Light Green (Alaska WR) 2 = Medium Green 3 = Dark Green (Alderman)
 4 = Other (Specify) 5 = Blue 6 = Purple 7 = Yellow
 Surface: 1 = Smooth 2 = Rough ☐ 2 Surface: 1 = Shiny 2 = Dull
 Borne: 1 = Single 2 = Double 3 = Single and Double 4 = Single, Double, & Triple 5 = Double & Triple
 6 = Triple 7 = Other (Specify) 8 = Quad, Single, Double, Triple 9 = Quad
☐ 7 ☐ 5 CM. Length ☐ 1 ☐ 3 MM. Width (Between Sutures) ☐ 0 ☐ 6 No. Seeds Per Pod
 8.5 ovules per Pod

9. SEEDS (95-100 Tenderometer):

☐ 1 Color: 1 = Light Green 2 = Green 3 = Dark Green 4 = Other (Specify) 5 = Yellow
 6 = Brown 7 = Yellow green
 Seive: % ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ Average

SEEDS (Dry, Mature):

☐ 4 Shape: 1 = Flattened 2 = Angular 3 = Oval 4 = Rounded 5 = Splashed 6 = Flecked 7 = Bicolored
☐ 1 Surface: 1 = Smooth 2 = Dimpled ☐ 2 Surface: 1 = Shiny 2 = Dull
 3 = Wrinkled
☐ 1 Color Pattern: 1 = Monocolor 2 = Mottled 3 = Striped 4 = Dotted
☐ 1 Primary Color ☐ Secondary Color
 1 = Creamy - White 2 = Cream & Green 3 = Light Green
 4 = Medium Green 5 = Dark Green 6 = Blue-Green
 7 = Yellow 8 = Brown 9 = Red 10 = Gray 11 = Black
 12 = Salmon 13 = Purple 14 = Tan 15 = White
 16 = Pink 17 = Yellow-Green
☐ 1 Hilum Floor Color: 1 = White 2 = Tan ☐ 2 Cotyledon Color: 1 = Green 2 = Yellow
 3 = Black 3 = Orange 4 = Cream
☐ 2 ☐ 4 Grams per 100 Seeds

10. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Moderate Resistant; 4=Moderate Susceptible; 5=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

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<input checked="" type="checkbox"/> 4	Fusarium Wilt - Race 1	<input type="checkbox"/> 0	Fusarium Wilt (Near Wilt) - Race 2
<input checked="" type="checkbox"/> 4	Ascochyta Blight	<input type="checkbox"/> 0	Common Mosaic
<input type="checkbox"/> 0	Bacterial Blight	<input type="checkbox"/> 0	Pea Enation Mosaic Virus
<input type="checkbox"/> 0	Downy Mildew	<input type="checkbox"/> 0	Seedborne Mosaic Virus
<input checked="" type="checkbox"/> 2	Powdery Mildew	<input type="checkbox"/> 0	Yellow Bean Mosaic Virus
<input checked="" type="checkbox"/> 3	Other (Specify) <u>Mycosphaerella Blight</u>	<input type="checkbox"/> 0	Leaf Roll Virus
<input type="checkbox"/>	Other (Specify) _____	<input type="checkbox"/>	Other (Specify) _____

11. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Moderate Resistant; 4=Moderate Susceptible; 5=Tolerant)

<input checked="" type="checkbox"/> 0	Aphids	<input type="checkbox"/>	Other (SPECIFY)
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12. Additional information on any item above, or general comments that may aid in identification:

Please, refer to additional information attached.

1. UPOV Variety Description Report from the
Plant Variety Rights Office
Cambridge, CB3 0LF, UK
Dated: 11. December 2001, AFP # 11/623
2. Variety Description, Application # 00-2221
CANADA

} Exhibit D

Exhibit C:

Q: "Conflicting information"

A: Plant height: The recorded height of pea plants depends on the exact time when you measure it.

Look for example at the data provided from SASA under humid long season conditions:

		Plant Height in cm at 80% flowering	Plant Height in cm. at final growth
Year 2000	DS Admiral	100	121
	Eclipse	75	97
Year 2000	DS Admiral	96	122
	Eclipse	76	116

In addition the height of the plants will vary due to growth conditions. From approximately 60 cm. in dry & short season cond. vs. 130 cm in very fertile humid and long season conditions. So as a general statement on the average height on DS Admiral for medium season & semi-humid conditions, where most commercial crops are grown, 90 cm is a good estimate. The relative difference between the two varieties is stable over environments, so 75 cm for Eclipse is right. We would therefore like to change the Exhibit C point 3: Plant Height to 90 cm. for DS Admiral.

A: Shape of distal part of pod: The shape of the distal part of the pod is clearly blunt. As can be seen in UPOV description from SASA. So the statement in Canadian variety description Exhibit D, 2 is wrong. It should say blunt not pointed.

A: Number of ovules per pod: The number of ovules per pod is 8,5 on average over two years in the UPOV description from SASA. And since the plants and pods have been very well developed under these humid Scottish conditions we would like to stick with the number 8,5 as the maximum expressed number of ovules for DS Admiral.

A: Colour of immature seed: The colour of the immature seed is pale green in the UPOV description from SASA. The scales in Exhibit C point 8 Pods: Colour has three levels 1, 2 or 3 in the green colour range. This is actually a very coarse scale. We as well as most of the pea industry use a scale for intensity of green colour with 9 steps. On the "9" scale DS Admiral is 3 "pale green" and Eclipse is 4 "pale to medium green". If we transfer the "9" scale to the "3" scale as in Exhibit C point 8. Both DS Admiral and Eclipse will fall in to the same category = 1. In practice nearly all field pea varieties would fall in to the category 1. Category 2 would hold the lighter vegetable peas and category 3 all the darker or very dark vegetable peas.

So as a consequence hereof the Exhibit C point 8 Pods: Colour should be changed to 1 from the current note 2.

Exhibit D:

Q: "Conflicting information, flower base"

A: The UPOV description statement "arched to strongly arched is correct"

PEA

(Pisum sativum L. sensu lato)

Proposed denomination: 'DS Admiral' (see figure ?)
Application number: 00-2221
Application date: 2000/05/01
Applicant: Danisco Seed
 Holeby, Denmark
Agent in Canada: Agriprogress Inc.
 Morden, Manitoba

Variety used for comparison: 'Eclipse'

Summary: 'DS Admiral' is a taller plant than 'Eclipse'. 'DS Admiral' has stronger expression of rabbit ear stipules. The density of flecking on the stipule is less dense on 'DS Admiral' than on 'Eclipse'. 'DS Admiral' is resistant to powdery mildew while 'Eclipse' is susceptible.

Description: 'DS Admiral' is a field pea variety which has no stem fasciation. The plants are green, and have no anthocyanin colouration. The vines are medium to long in length. 'DS Admiral' is a semi-leafless variety, and the stipules are slightly waxy. Stipule development is normal, with strong expression of rabbit eared stipules, and stipule flecking is sparse to medium.

'DS Admiral' flowers mid-season and bears medium number of flower bearing nodes per stem. There are two flowers per node. The standard is white with a level to arched base and the apex of the upper calyx lobe is acuminate. The peduncle from stem to first flower is medium to long in length.

'DS Admiral' produces green pods, with a very weak to weak concave curvature. The distal part is pointed and there are an average of seven ovules per pod. The immature seeds of 'DS Admiral' are light to medium green. The dry seeds are medium to large in size, spherical in shape with yellow cotyledons, no black hilum and very weak to weak wrinkling of the cotyledons. The starch grain is simple. 'DS Admiral' matures mid-season.

'DS Admiral' is moderately susceptible to, root rot (*Fusarium oxysporum* f.sp. *pisi*), and mycosphaerella blight (*Mycosphaerella pinodes*). 'DS Admiral' is resistant to powdery mildew (*Erysiphe polygoni*).

Origin and Breeding History: 'DS Admiral' originated from the cross Renata//Bohatyr/M420062 made in 1988 in Holeby, Denmark. The selection was made by pedigree breeding method in F₂, F₅, and F₉. Selection criteria were high seed yield, round yellow seed, resistance to powdery mildew, early maturity, and good straw stiffness. First generation breeders seed was obtained as progeny from F₉ single plants.

The variety is maintained by Agriprogress Inc., in Morden, Manitoba.

Test and Trials: Tests and trials for 'DS Admiral' were conducted at the AAFC Research Station in Morden, Manitoba, in the summers of 2000, and 2001. The trial layout was a 4 rep RCBD design with 5 rows per rep.

Table 7: Comparison table for 'DS Admiral'

	'DS Admiral'	'Eclipse'
Plant height (cm)		
mean	79	64
standard deviation	3.4	5.1
Stem: vine length (cm)		
mean	85	75
standard deviation		
Seed weight (grams per 1000 seeds)		
	240	236

* reference variety

Proposed denomination: 'DS Dominator' (see figure ?)
Application number: 00-2220
Application date: 2000/05/01
Applicant: Danisco Seed
 Holeby, Denmark
Agent in Canada: Agriprogress Inc.
 Morden, Manitoba

Variety used for comparison: 'Keoma'

Summary: 'DS Dominator' is a shorter plant than 'Keoma'. 'DS Dominator' has shorter stipules and tendril petiole length than 'Keoma'. The density of flecking of the stipule is less in 'DS Dominator' than in 'Keoma'. 'DS Dominator' flowers and matures later than 'Keoma'. 'DS Dominator' is resistant to powdery mildew while 'Keoma' is not.

Description: 'DS Dominator' is a field pea variety which has no stem fasciation. The plants are green, and have no anthocyanin colouration. The vines are short to medium in length. 'DS Dominator' is a semi-leafless variety, and the leaves and stipules are slightly waxy with no dentation. Stipule development is normal and stipule flecking is sparse.

'DS Dominator' flowers mid-to late in the season and bears medium to many number of flower bearing nodes per stem. There are two flowers per node. The standard is white, with a level base and the apex of the upper calyx lobe is pointed. The peduncle from stem to first flower is medium in length.

'DS Dominator' produces green pods, with a very weakly concave curvature. The distal part is pointed and there are an average of six to seven ovules per pod. The immature seeds of 'DS Dominator' are light green. The dry seeds are small to

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REFERENCE OF TEST AUTHORITY:	Application number:	Breeder's reference:	Applicant:
19489	AFP: 11/623	DS49376	Danisco Seed Højbygårdvej 14, Postboks 29 DK-4960 Holeby DENMARK

UPOV VARIETY DESCRIPTION

Botanical name of taxon:	<i>Pisum sativum</i> (L).	Testing authority:	Plant Variety Rights Office, Cambridge, CB3 0LF, UK.
Common name of taxon:	PEA	Testing place:	SASA, 82 Craigs Road, Edinburgh, EH12 8NJ, UK.
Variety denomination:	DS49376	Period of testing:	2000 2001
UPOV Test Guidelines:	Doc. No: TG/7/9 Date: 1994-11-04	Date of issue of this document:	11 December 2001
National Test Guidelines:	Doc. No: Date:		

A. Group:	(If characteristics of Chapter B are used for grouping they are marked with a G in that Chapter)
B.	Characteristics included in the UPOV Test Guidelines or National Test Guidelines

UPOV No.	Nat No.	Characteristics	States of expression	Note	Remarks
01		Seed: shape	ovoid	2	
* 02		Seed: shape of starch grain	simple	1	G
* 03		Seed: colour of cotyledon	yellow	2	G
* 06		Seed: black colour of hilum	absent	1	G
* 09		Plant:anthocyanin coloration	absent	1	G
11		Stem: fasciation	absent	1	
* 12		Stem: length (after flowering)	long	7	121 cm
13		Stem: number of nodes up to and including first fertile node	medium to many	6	18
* 16		Foliage: colour	green	2	G
17		Foliage: intensity of colour (<i>excluding yellow-green and blue-green varieties</i>)	medium to dark	6	
* 19		Leaf: leaflets	absent	1	G
* 28		Stipule: type of development	well developed	2	G
29		Stipule: 'rabbit-eared' stipules	absent	1	G
* 33		Stipules: flecking	present	9	G
* 36		Time of flowering	medium	5	20 days after <i>Orfac</i>
* 37		Flower: maximum number of flowers per node	two	3	
41		Flower: colour of standard (<i>Varieties without anthocyanin only</i>)	white to cream	2	
43		Flower: shape of base of standard	arched to strongly arched	8	
* 48		Pod: length	short	3	75mm
* 49		Pod: maximum width	very narrow to narrow	2	13mm

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AP.

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	UPOV No.	Nat No.	Characteristics	States of expression	Note	Remarks
	50		Pod: parchement	entirely present	3	G
*	52		Pod: degree of curvature	weak	3	
*	53		Pod: type of curvature	concave	1	
*	54		Pod: shape of distal part (Varieties without thickened pod wall only)	blunt	2	G
*	55		Pod: colour	green	2	G
	56		Pod: intensity of green colour	pale	3	
	60		Pod: number of ovules	medium	5	8.5
	61		Pod: intensity of green colour of immature seed	pale	3	G
	63		Seed: wrinkling of cotyledon	absent	1	
*	65		Seed: weight of 100 seeds (g)	small to medium	4	26 g
	66.1		Resistance to <i>Fusarium oxysporum</i> f. sp. pisi Race 1	absent	1	

COMMENTS: Candidate **DS49376** is closest to Cebeco 1475 but differs in the following characters:

UPOV No	CHARACTER	DS49376	Cebeco 1475
10	Plant: height	tall (7)	medium (5)
43	Flower: shape of base of standard	arched to strongly arched (8)	level to arched (6)
66.1	Resistance to <i>Fusarium oxysporum</i> f. sp. pisi Race 1	absent (1)	present (9)

February 5, 2000

To: Members of the Special Crops Subcommittee, PRRCG.

Request for support for registration of field pea line DS49376

Proposers: Ottmar Philipp, (Agriprogress Inc., Box 2499, Morden, MB.), Lars Andersen, (Danisco Seed, DK-5460 Holeby, DENMARK), Tom Warkentin, (CDC University Saskatoon, Saskatoon, SK), Allen Xue, Al Sloan and Deng-Jin Bing (AAFC, Morden Research Centre, Unit 100-101, Route 100, Morden, MB. R6M 1R3)

Origin and pedigree:

The yellow cotyledon field pea line DS49376 was bred by Danisco Seed, Denmark. The last cross (RENATA x (BOHATYR x M420062)) was made in 1988. DS49376 was selected by pedigree breeding and selection was made in F2, F5 and F9. The main selection criteria were: High seed yield, round yellow seed, resistance to powdery mildew, good straw stiffness and early maturity. The variety was selected for adaptation to Western Canada in Morden Research Centre trials in 1996 and 1997 before entering the Co-operative Registration Test in 1998 and 1999.

Strengths:

- 1. Yield:** DS49376 had yield 2% greater than Carneval, 1% greater than Delta and 2% lower than Carrera over 22 station years. Overall yield advantage was greater in Zone 2 sites with 5% greater than Carneval, 3% greater than Delta and equal to Carrera.
- 2. Powdery mildew resistance.** DS49376 is resistant to powdery mildew compared to Carneval, Carrera and Delta which are susceptible.
- 3. Lodging score:** DS49376 had a slightly higher Late-flower and Pre-harvest lodging score than Carneval but lower Pre-harvest scores than Carrera and Delta.
- 4. Seed breakage:** DS49376 had lower seed breakage (2.2%) when compared to Carneval (9.2%), Carrera (3.3%) and Delta (4%).
- 5. Seed shape:** DS49376 was rounder in seed shape (2.4) when compared to Carneval (2.5), Carrera (2.5) and Delta (2.6).

Neutral:

- 1. Seed quality:** DS49376 has larger seed weight (236g) than Carneval (204g) and Delta (227g) and is similar to Carrera (239g). Protein content is equal to Carneval (23.2%) and lower than Carrera (24.2%) and Delta (24.0%). Cooking quality shows a higher viscosity than the check varieties. The seed quality is suitable for human consumption and animal feed.
- 2. Maturity:** DS49376 has the same maturity as Carrera, one day earlier than Carneval and one day later than Delta.

Limitations:

- 1. Mycosphaerella blight score:** DS49376 had the same mycosphaerella blight score than Carneval (5.3) but lower than Carrera and Delta.
- 2. Fusarium wilt:** DS49376 expressed a higher percentage of fusarium wilt (16.2%) than Delta (13.4%) but lower than Carneval (25%) and Carrera (24.2%).

Two Year Summary of Data (1998-1999) for DS49376

Field Pea Co-operative Registration Test-A

	Station Years			L.S.D. 5%			DS49376			Carneval			Carrera			Delta			Keoma		
	z1	z2	Total	z1	z2	Total	z1	z2	Mean	z1	z2	Mean	z1	z2	Mean	z1	z2	Mean	z1	z2	Mean
Agronomic Characteristics :																					
1. Yield (kg/ha)	9	13	22	489	353	286	5299	4130	4609	5378	3932	4524	5521	4125	4696	5343	4016	4559	4535	3523	3937
2. Yield (% of Carneval)							99	105	102	100	100	100	103	105	104	99	102	101	84	90	87
3. Days to Flower	6	9	15	1.1	0.8	0.6	60	57	58	61	58	59	57	54	55	60	57	58	59	55	57
4. Days to Mature	8	11	19	1.6	1.3	1.0	100	93	96	100	94	97	99	93	96	98	93	95	97	92	94
5. Length of Vine (cm)	7	11	18	6.5	3.3	3.2	96	81	87	90	78	83	76	65	69	87	72	78	75	63	68
6. Late-flower Lodging Score	5	10	15	1.1	0.5	0.5	2.1	2.4	2.3	2.0	2.1	2.1	2.7	2.3	2.5	1.5	2.1	1.9	4.2	2.6	3.2
7. Pre-harvest Lodging Score	9	9	18	0.8	1.0	0.6	5.2	3.4	4.3	4.9	3.3	4.1	7.0	5.1	6.1	6.3	4.1	5.2	8.2	5.9	7.0
8. Leaf Type									SL			SL			SL			SL			SL
Quality Characteristics :																					
9. Seed Weight (mg)	9	13	22	9.9	8.2	6.4	236	236	236	203	205	204	232	244	239	229	225	227	188	190	189
10. Cotyledon Color									Y			Y			Y			Y			G
11. Seed Coat Color									W			W			W			W			W
12. Seed Shape	9	13	22	0.1	0.1	0.1	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.5	2.5	2.5
13. Green Bleaching Score	9	13	22	0.1	0.1	0.1													3.0	3.0	3.0
14. Green Color Intensity	9	13	22	0.3	0.2	0.1													4.0	4.0	4.0
15. Seed Breakage (%)	3	5	8	NS	6.0	3.9	0.9	2.9	2.2	3.6	12.5	9.2	2.5	3.7	3.3	0.7	6.0	4.0	1.2	2.9	2.3
16. Protein Content (%)	3	7	10	0.9	0.8	0.6	24.1	22.8	23.2	23.7	23.0	23.2	24.6	24.1	24.2	24.4	23.8	24.0	23.0	22.9	22.9
17. Cooking Quality:																					
Color	1	3	4		0.2	0.1	2.3	1.7	1.9	2.3	1.7	1.8	2.8	2.7	2.7	2.3	2.5	2.5	2.8	2.8	2.8
Granulation	1	3	4		0.1	0.1	2.3	2.1	2.2	2.5	2.2	2.3	1.8	1.9	1.9	1.8	1.7	1.7	2.3	2.5	2.5
Viscosity	1	3	4		1.4	1.2	17.3	7.9	10.3	18.6	12.4	13.9	17.6	13.1	14.2	17.5	14.1	15.0	23.8	21.4	22.0
Disease Evaluation :																					
18. Mycosphaerella Blight			2			1.1			5.3			5.3			5.7			5.6			5.8
19. Powdery Mildew			2			0.8			0.0			4.0			8.7			8.0			8.2
20. Fusarium Wilt (%)			2			40.0			16.2			25.0			24.2			13.4			26.7

6., 7. 1 = completely upright, 9 = completely flat

8. N = Normal; SL = Semi-leafless

10. Y = Yellow; G = Green

11. W = White; C = Colored

12. 1 = Round, 5 = Cubed and 2.5 = Carneval

13. 1 = less bleaching than Keoma, 5 = more bleaching than Keoma and 3 = Keoma

14. 1 = darker green than Keoma, 5 = lighter green than Keoma (usually blue-green) and 4 = Keoma

16. Protein content = N * 6.25

17. Color and granulation were subjectively evaluated on a scale of 1-5 where 1=very good and 5=poor

17. Viscosity of puree was measured on a scale of 1-24 where 1 = high and 24 = low

18. 0 = no disease; 9 = whole plant severely blighted. Cultivar Radley was used as a standard check for mycosphaerella blight. Two year mean score in Test-A was 4.7

19. 0 = no disease; 9 = whole plant severely mildewed

NS = Not significant at alpha = 0.05

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) <i>Ottmar PHILIPP</i>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <i>DS 49376</i>	3. VARIETY NAME <i>DS-Admiral</i>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) agriprogress inc. P.O.Box 2499 Morden, MB R6M 1C2 Phone 204-331-3611 Fax 204-325-8052	5. TELEPHONE (Include area code) <i>204-331-3611</i>	6. FAX (Include area code) <i>204-325-8052</i>
7. PVPO NUMBER 200300244		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☐ YES ☒ NO*See attached Proxy
North American Rights only*9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☐ YES ☒ NO*CANADA*10. Is the applicant the original owner? ☐ YES ☒ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☒ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☒ NO If no, give name of country*Denmark*

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

*See attached Proxy
Applicant is the exclusive Agent for the Variety in North America.***PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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PROXY

For applications for Plant Breeder's Right and/or for the entry of a variety in the USDA List of Varieties.

The undersigned: Danisco Seed
Højbygårdvej 31
DK-4960 Holeby
Denmark

electing domicile for this matter at the address of the authorised agent to be named hereafter, declares that he authorises:

Agriprogress Inc.
P.O.Box 2499
Morden, MB
R0G 1J0
Canada

to submit for and on behalf of him an application to the USDA authorities for Plant Breeder's Right and/or for the entry in the USDA List of Varieties belonging to the species:

Pisum sativum, field peas,
the following variety originally bred and owned by Danisco Seed
with the provisional designation: 4-9376
and the proposed name: DS-ADMIRAL

to prepare, sign and submit the documents necessary for that purpose, to appear, on being duly summoned, before the Authorities for Plant Breeder's Right, to do everything that the undersigned himself would have been able, competent or obliged to do, with full power of substitution,

and to carry out on an exclusive basis multiplication of seed necessary for supplying the seed market adequately with said variety.

Holeby, 7 April 2003

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Danisco Seed

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